

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
15 September 2005 (15.09.2005)

PCT

(10) International Publication Number
WO 2005/086546 A3

(51) International Patent Classification⁷: **G06K 7/00**

(21) International Application Number:
PCT/EP2005/050727

(22) International Filing Date:
18 February 2005 (18.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0404922.7 4 March 2004 (04.03.2004) GB
0502343.7 4 February 2005 (04.02.2005) GB

(71) Applicants (for all designated States except US): **LIP-MAN ELECTRONICS ENGINEERING LIMITED** [IL/IL]; 11 Haamal Street, Park Afek, Rosh Haayin 48092 (IL). **GARRIDO-GADEA, Enrique** [GB/GB]; 213 Amersham Road, Hazlemere Buckinghamshire HP15 7QX (GB). **GRAHAM HODGES, Andrew** [GB/GB]; 19 Warren Close Stone, Aylesbury Buckinghamshire HP17

8YL (GB). **ANDREW HODSON, Richard** [GB/GB]; 7 Burninston Close Lower Earley, Reading Berkshire RG6 3XE (GB).

(72) Inventors; and

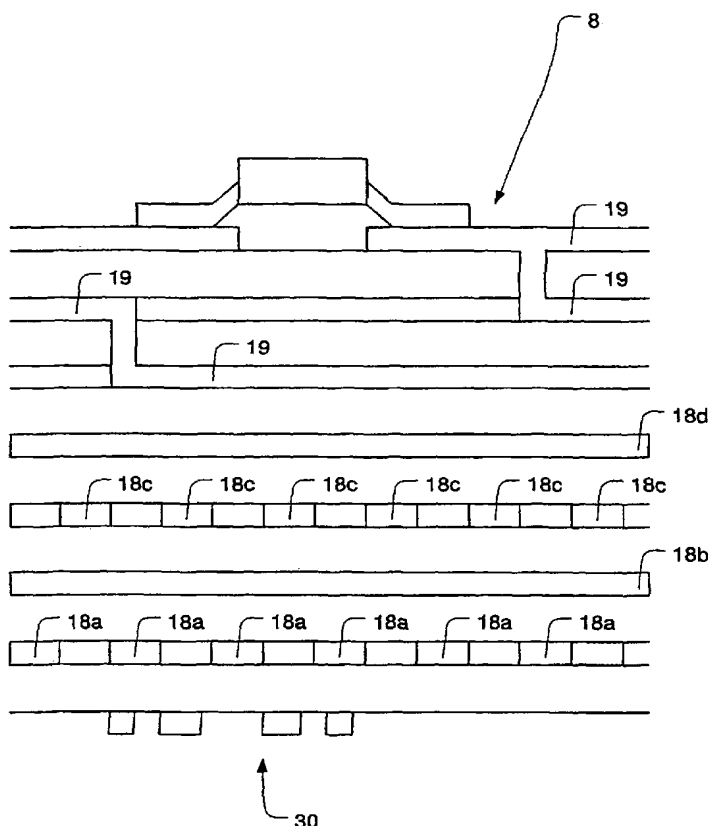
(75) Inventors/Applicants (for US only): **WARD, Richard** [GB/GB]; 10 Saunders Close, Oxford, Watlington Oxfordshire OX49 5QY (GB). **RICHARDS, Gareth Alexander** [GB/GB]; 17 The Custom House Redcliffe Backs, Bristol Avon BS1 6NE (GB).

(74) Agents: **GEARY, Stuart Lloyd et al.**; Venner, Shipley LLP, 20 Little Britain, London Greater London EC1A 7DH (GB).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY,

[Continued on next page]

(54) Title: SECURE CARD READER



(57) Abstract: A secure card reader (1) includes several security measures. Access to the reader's main circuitry is prevented by an enclosure (9) whose walls contain embedded i conductive paths (18a, 18b, 18c). Breaking or grounding of one of these paths can be detected electronically. A similar arrangement of conductive paths prevent enlarging of a card receiving slot (9c) If tampering is detected using the embedded conductive paths (18a, 18b, 18c), the reader's memory (69) is wiped. The enclosure (9) has apertures (20) in its walls and is held in place by a potting material that extends into the apertures. Means (31, 35) is also provided to detect attempts to probe behind a keypad membrane (7). The contacts (42) for the chip of a chip card are arranged so that their leads all extend away from the card insertion slot.

WO 2005/086546 A3



TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

- (84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

- (88) **Date of publication of the international search report:**

12 January 2006

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.